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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,222

09/18/2006

Jean-Francois Pintos

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Thomson Licensing LLC

P.O. Box 5312

Two Independence Way

PRINCETON, NJ 08543-5312

EXAMINER

HU, JENNIFER F

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,222	Applicant(s) PINTOS ET AL.	
	Examiner JENNIFER F. HU	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09/18/2006 and 06/04/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1- 9 are presented for examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statement filed September 18, 2006 and June 4, 2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because no English translation or abstract has been provided for French reference FR 2 846 239. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukasawa (US 5,966,097 – cited by Applicant).

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6. As to claim 1, Fukasawa teaches a data transmission system comprising an antenna provided with at least a monopole radiating element (2, Fig. 1) mounted on a conductive earth plane (1, Fig. 1) the radiating element is connected to the conductive surface of the earth plane via a mast (2a, Fig. 1) located near an edge of said conductive surface.

As to claim 2, Fukasawa teaches the radiating element is connected to the conducting surface of the earth plane via a mast fastened to the radiating element at its point of excitation, this point of excitation is off-centered with respect to the surface of the earth plane (Fig. 1).

As to claim 5, Fukusawa teaches a first compact radiating element (2, Fig. 1) and a second compact radiating element (3, Fig. 1) mounted on the same conductive earth plane (1, Fig. 1) via masts (2a, 3a, Fig. 1) located on separate edges of said earth plane.

7. Claims 1, 6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Trowbridge (US 2,604,593).

As to claim 1, Trowbridge teaches a data transmission system comprising an antenna provided with at least a monopole radiating element (17, 18, Fig. 1) mounded on a conductive earth plane (9, Fig. 1), wherein the radiating element is connected to the conductive surface of the earth plane via a mast (19, 20, Fig. 3) located near an edge of said conductive surface.

As to claim 6, Trowbridge teaches the antenna is provided with a hollowed-out radiating element (“telescopically extensible,” col. 1, line 12 indicates that the bottom portions of radiating arms 17 and 18 are hollow so that upper portions 17a, 17b, 18a, and 18b may be retracted into the hollow portion).

As to claim 9, Trowbridge teaches the antenna includes means for pivoting about a rotation mechanism with respect to the surface of the earth plane (col. 1, lines 7-23).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukasawa.

As to claim 4 Fukasawa teaches the system substantially as claimed as applied to claim 1 above, but does not explicitly teach means so that its reflection coefficient is less than -10 dB in the operating frequency band. However, it is well known in the art that the operating bandwidth of an antenna is defined where the reflection coefficient is less than -10 dB (page 45).

As to claim 8, Fukasawa does not explicitly teach means for receiving and decoding transmitted signals within the context of digital terrestrial television within the frequency band lying between 470 and 862 MHz. However, it is well known in the art that antennas may be scaled in size according to the desired operating frequency.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukasawa in view of Herting (*Finite ground plane packaging effects on a dual-band PIFA* —cited by Applicant). Fukasawa teaches the system substantially as claimed as applied to claim 1 above, but does not teach the earth plane has at least one of its dimensions, such as its length, its width and/or its height, of the order of a multiple of $\lambda/2$ where λ is a wavelength used by the antenna. Herting teaches adjusting the length of a finite ground plane of a PIFA can increase the bandwidth, and the bandwidth varies periodically by multiples of $\lambda/2$ where λ is a wavelength used by the

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antenna. Therefore, it would have been obvious to one of ordinary skill in the art to adjust a dimension of the ground plane on the order of a multiple of $\lambda/2$ where λ is a wavelength used by the antenna in order to obtain the desired bandwidth.

11. Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Fukasawa in view of Scheppman (US 3,987,448). Fukasawa does not teach the earth plane of the antenna corresponds to one face of a digital terrestrial television decoder. However, it is common in the art that the housing of an electronic device form the ground plane of the antenna of the device, as taught by Scheppman (col. 4, lines 30-31). It would have been obvious to one of ordinary skill in the art that the conductive ground plane of Fukasawa could be modified to be an integral part of the housing of an electronic device, such as a digital terrestrial television decoder.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER F. HU whose telephone number is (571) 270-3831. The examiner can normally be reached on Monday-Friday 9:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JENNIFER F HU/
Examiner, Art Unit 2821

/Douglas W Owens/
Supervisory Patent Examiner, Art Unit 2821
June 17, 2009